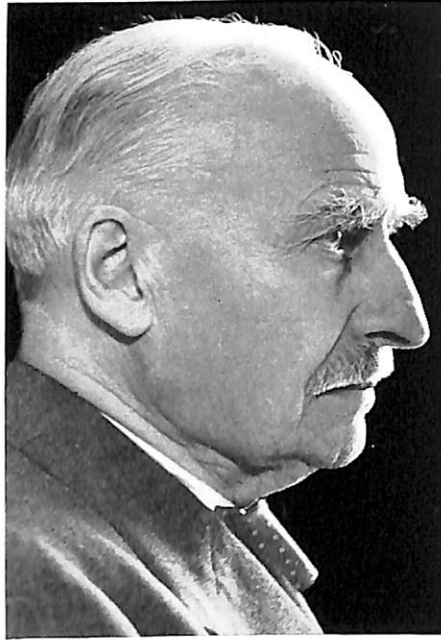


Leica

PHOTOGRAPHY

Vol. 9 • No. 2 • Summer 1956 • 25¢



1871

DR. ERNST LEITZ, SR.

1956

With deep regret, we announce the death on June 15 of Dr. Ernst Leitz, Sr., son of the founder of Ernst Leitz, G.m.b.H., Wetzlar. He was 85.

Dr. Leitz, Sr., whose career was reviewed in our Spring issue, first became active in the management of his family's firm in 1898. During his years of leadership he fostered the solution to many problems involving not only the technical aspects of Leitz products, but also the human aspects of employee relationships and welfare. It was his faith and encouragement that brought the first Leica into being.

The death of Dr. Leitz is a loss not only to his family, friends, and employees (most of whom he knew by their first names), but to the entire optical industry in which his name stood so high.

Leica

PHOTOGRAPHY

VOLUME 9 • NUMBER 2 • SUMMER 1956

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COVER

Clyde Hare

Mountain meadow on Hurricane Ridge, Olympic National Park, State of Washington. The photographer used Kodachrome, Daylight type, exposing 1/10 second at f/16, with Leica IIIIf and 35mm Summaron lens, camera mounted on a tripod.

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The editors are happy to consider original articles on photography with the Leica and photographs taken with Leica cameras and lenses. All manuscripts and photographs should be accompanied by stamped, self-addressed return labels.



news photographer with a 35mm

Tom Abercrombie sets a pace for newspaper cameramen

The disenchanted editor who defined a news photographer as "a reporter with his brains knocked out" had never met Tom Abercrombie of *The Milwaukee Journal*.

For Abercrombie, like most of his fellow photographers today, is far from the flamboyant extrovert of journalistic tradition. Modern newspapers insist not only that their photographers have brains, but also that they use them.

Abercrombie's cerebral approach to his work shows up in many ways. At 26, he has already been honored nationally by the University of Missouri in its annual news photo competition. The University named him

"Photographer of the Year." He has also thought his way out of the "press-camera" rut that dooms many news cameramen to the life of a pack horse. Having cut his photographic teeth on a Leica, Abercrombie saw no reason why he shouldn't use one to take newspaper pictures—despite the mackerel stare some of his editors gave him for this heresy.

Tom Abercrombie's thinking has also led him to do other things that "nobody" would do—and make it pay off. For instance, what young man with a wife and children would leave a permanent news photography job for a temporary one as a summer replacement that offered little except that often nebulous



"spot news." For a newsworthy sense of drama and high degree of realism the small camera is a "natural."



"human interest." Shot of people praying at faith healing rally substantiates the inconspicuousness of the "35."



"collision." Sensational effect of wide-angle lens points up another useful application of 35mm to news work.

commodity, "experience"? Abercrombie did. The job, of course, happened to be with *The Milwaukee Journal*, photographically one of the most progressive papers in the country. And the gamble paid off. At summer's end, the *Journal* was enough impressed with its temporary photographer to offer him a staff job.

Then Tom did some thinking about the *Journal's* picture page. From custom, it had always been something of a grab bag of feature shots. Abercrombie thought it should carry a picture story, with a theme to bring unity to the treatment.

"A small camera allows me a new approach to my pictures," says Abercrombie, "and you might even say gives a new kind of picture. It's unobtrusive. In

the time it would take me to set up a big box on a tripod and set out remote lights, I can shoot three dozen 35mm shots by existing light. And the subjects don't freeze up self-consciously, either. After the first three or four exposures with my Leica, my subjects generally seem to forget that I'm even there."

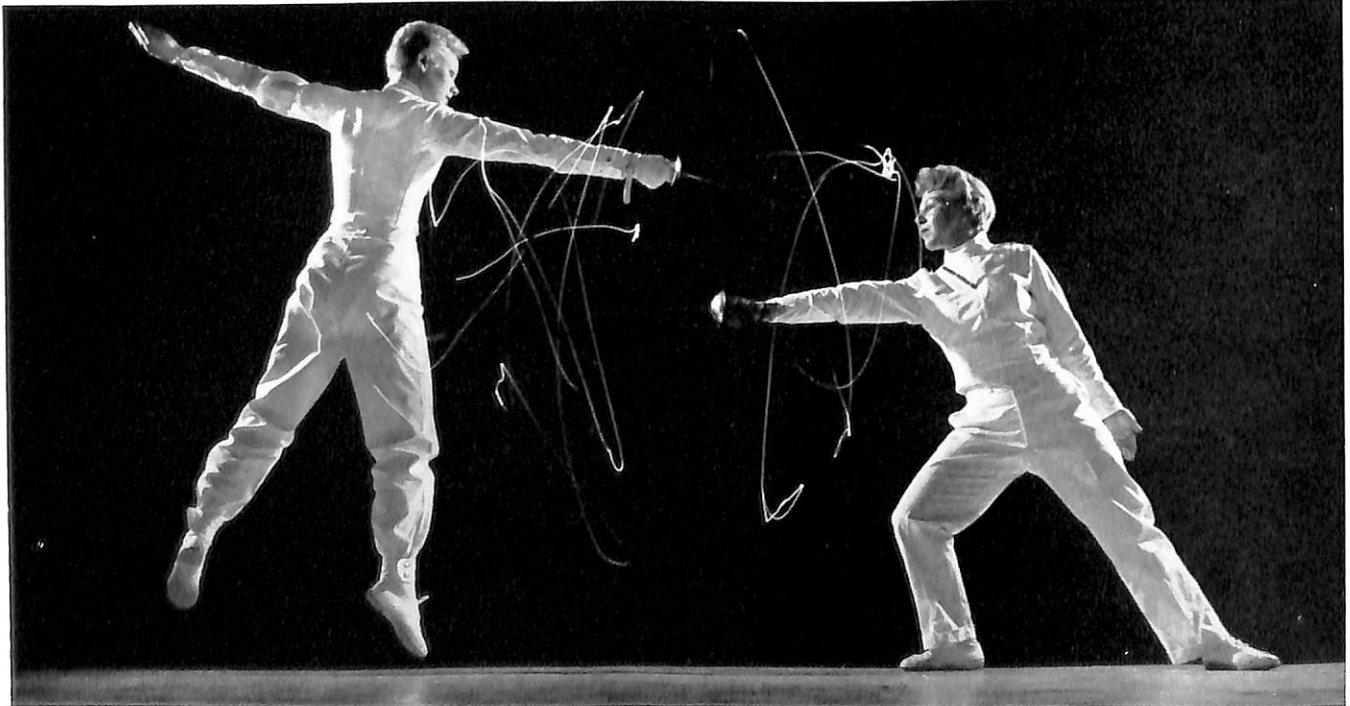
Editors resisted Abercrombie's use of the 35mm on the grounds that they needed prints *fast*. And who could turn out a print as fast from a roll of little negatives as from a single large sheet of film?

But when Abercrombie proved he could have a print from 35mm film within 12 minutes, objections were overruled. Moreover, the print quality was just as good as that given by larger negatives.

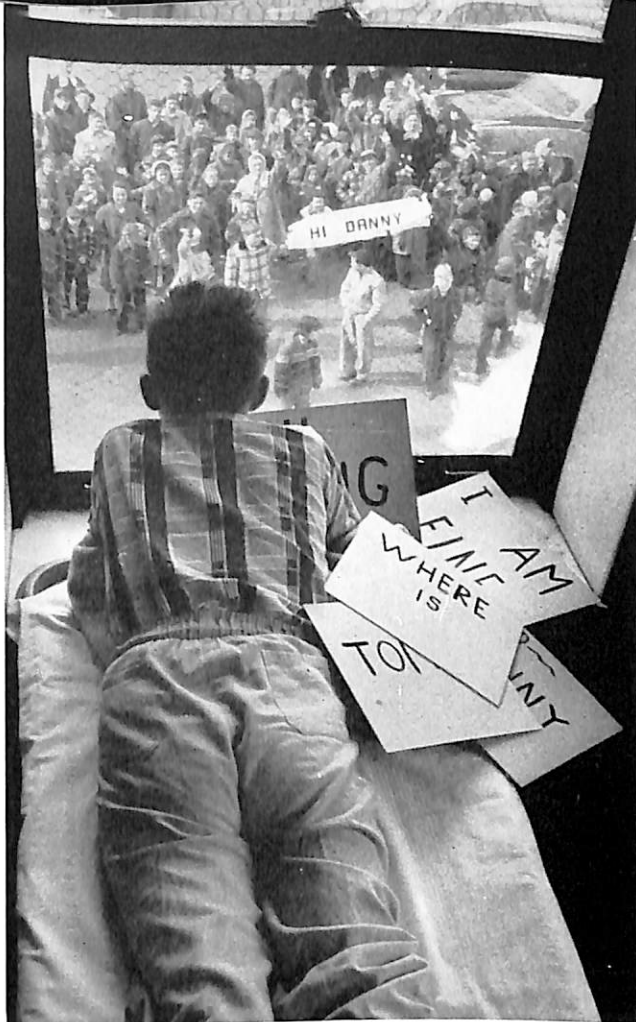
Although he still works with cameras of several formats, Abercrombie's missionary work with his Leica, plus the remarkable print quality he gets with thin-emulsion films, have begun rapidly to break down editorial opposition to small-format negatives. There is no longer a question of "processing problems."

And with the picture pages of the *Journal* alive with fresh new realism, Abercrombie's pioneering with 35mm has influenced not only his colleagues on the *Journal's* photo section, but fellow news cameramen throughout the country.

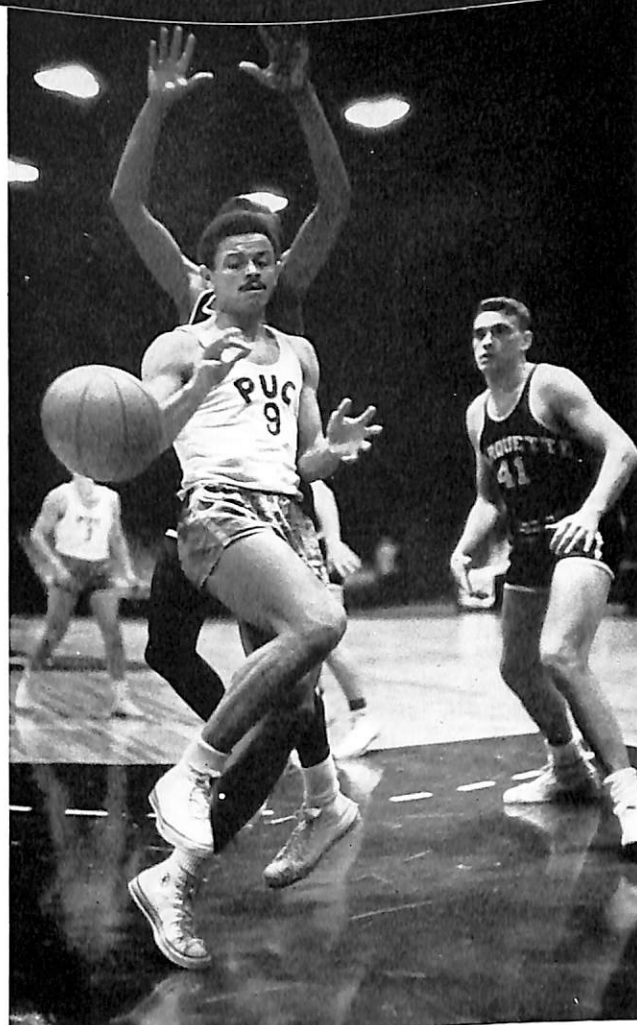
All photographs courtesy The Milwaukee Journal



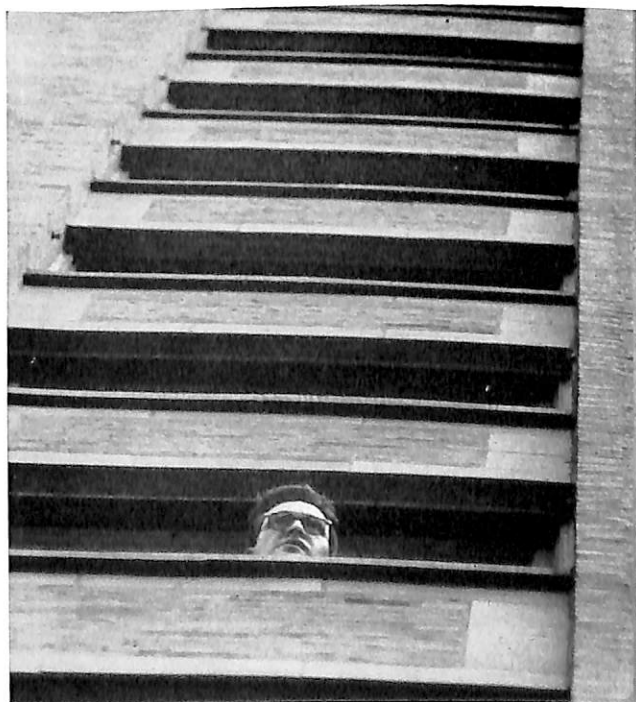
"feature." Versatility of the miniature extends to illustration. Combined electronic flash and time exposure was used here.



"health." Bounced flash was used for boy in contagious ward communicating with schoolmates through signs.



"sports." Existing light was sufficient to freeze this basketball play at 1/500 second with the 35mm's fast lens and film.



"parade." Old-hat subject is treated imaginatively, thanks to 200mm lens (equivalent to more than 20 inches on 4 x 5).



"the weather." Another familiar theme, given real and entertaining dimensions through "natural" approach of 35mm.

shadows, chalk and camera / *Edward Wallowitch*

a new game for children produced
these fascinating sidewalk personalities

One bright day a little boy named Billy discovered that the patterns his shadow made on the street could be a lot of fun. Soon he had started a game with his shadow companions, and his older brother and some of the neighborhood children joined in. By chalking the outlines of each other's shadows or by chalking imaginative outlines on the street, and then standing so their shadows formed a complement to them, they soon had developed a game of shadow and chalk that produced some interesting results.



INDIAN WARRIOR might very well be a favorite subject for faithful young fans of the romantic Wild West.



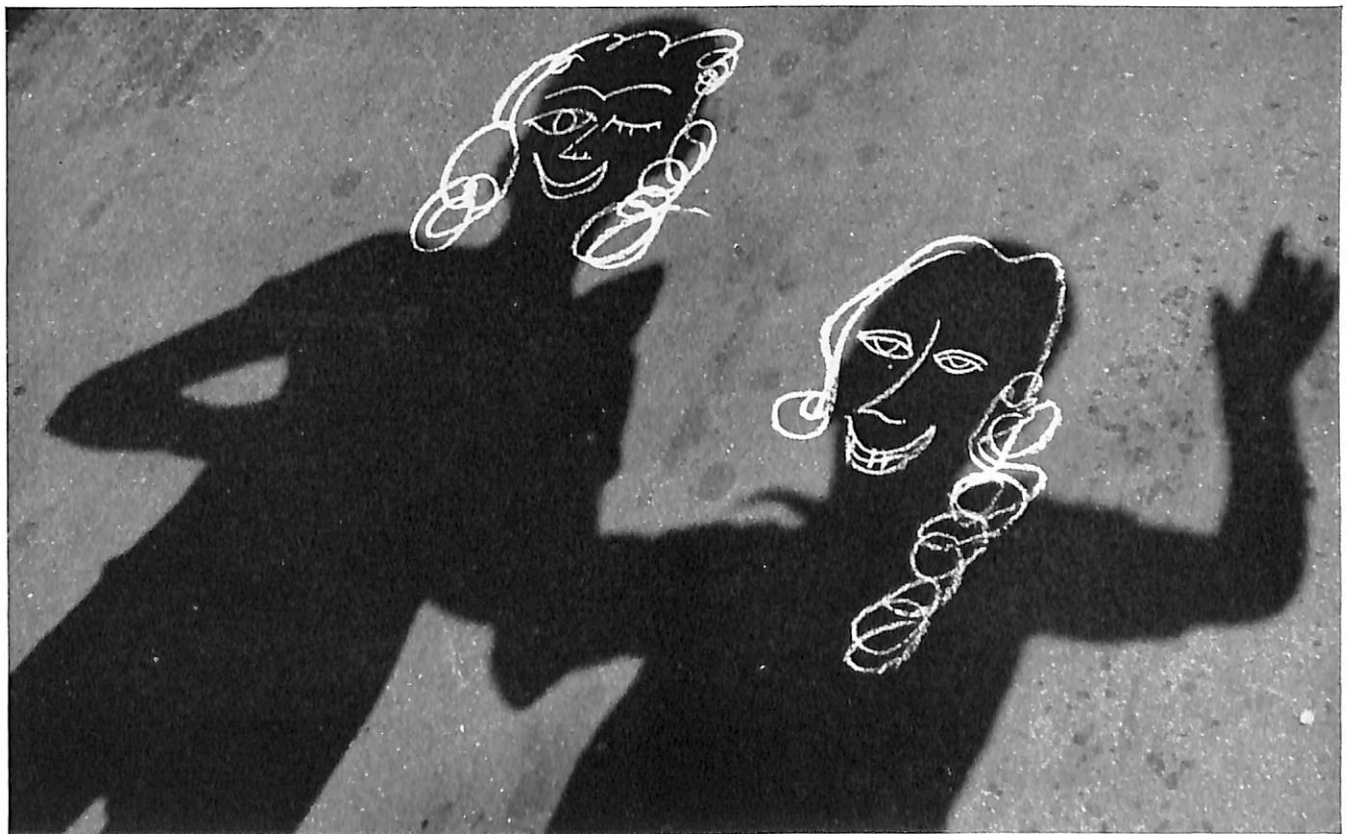
HULA DANCER of the South Seas would be a subject to intrigue many a young admirer of the lively arts.



ACTING GROWNUPS means wearing hat and carrying cane.



SELF-PORTRAIT of Billy shows self-awarded "art medal."



you take part in the fun by preserving the best shadow-and-chalk pictures with your camera

FLOWING TRESSES identify distaff side of the new game.

turn the page to see how it's done ►

shadows, chalk and camera

"Rules" for the photographer of the game

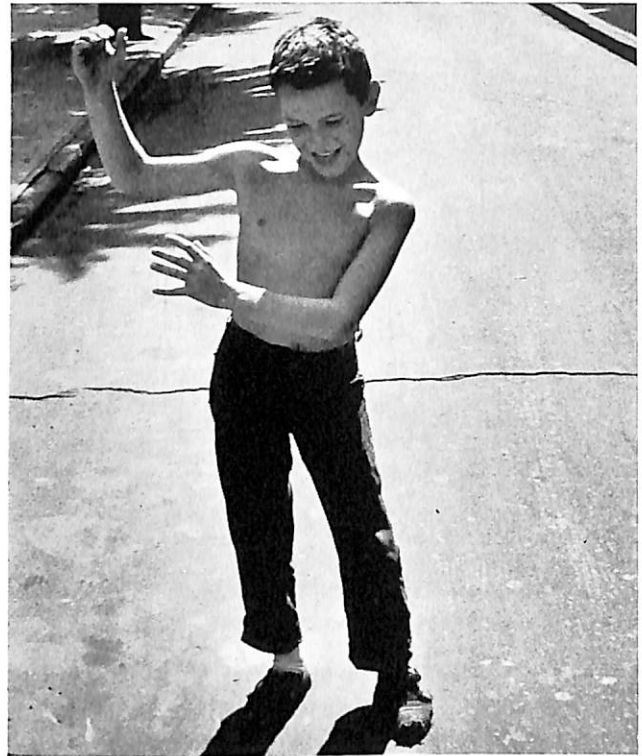
1. Load your camera with medium-speed panchromatic film, such as Adox KB-14.
2. Expose and develop for maximum contrast. When using a meter, take your reading on the illuminated portion of the sidewalk. Develop for these areas and the shadows will be dark.
3. Use a wide-angle lens to secure the most "flat" effect of the whole figure in shadow.
4. Get into the picture yourself by making suggestions; but be careful to avoid including the real shadow of the cameraman.
5. Make an album or picture book of the best shadow-and-chalk personalities.



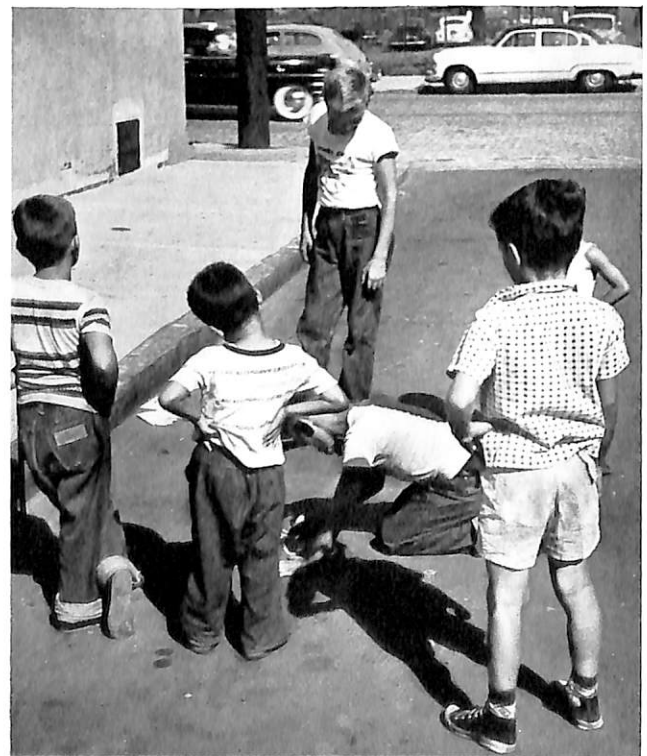
CHALKING requires a young player's intent concentration.



POSITION is then refitted into chalked outline.



TRYING DIFFERENT STANCES is first step of game.



"SIDEWALK ARTIST" is encouraged by audience of playmates.

when to use those super-speed films / Bob Schwalberg

new emulsions work best as "specialists"

Once there were photographers who used but one film and one developer, for better or for worse, in bright light and dim. This simplified technique to the point where exposure and development times could be chosen swiftly, surely, almost automatically.

Choosing a single film and developer for the bulk of 35mm picture-taking is still one of the surest paths to technical success in photography. The "standard" film has traditionally been a medium-speed, fine-grain, panchromatic material, such as Kodak Plus-X or Ansco Supreme. These and other general-purpose films are so versatile that, with appropriate exposure and development techniques, there is almost no photographic job they can't perform, from shooting in dim light to the production of sharp, fine-grain negatives for mural-size enlargements.

But two new types of specialist films are now attracting wide interest and enthusiasm among 35mm photographers: the new thin-emulsion films, which yield maximum image resolution and ultra-fine grain, and the super-speed films with nominal ASA exposure ratings from 200 to 400, which offer maximum emulsion speeds.

Because we have overemphasized the need for emulsion speed, the thin-emulsion films have been universally (and properly) regarded as specialists in the production of maximum image quality, while the new high-speed films, on the other hand, have been widely but quite improperly accepted as *fast general-purpose films*. The latter are anything but—as a matter of fact, they are even more narrowly specialized than the very slow thin-emulsion films.

The one single advantage of the high-speed film is speed itself. Films like Kodak Tri-X (introduced in 1954) and DuPont S-X Pan (introduced in March, 1956) permit short exposures in dim light without forced development. This means sharper available-light pictures (because of faster shutter speeds and/or smaller lens openings) with less grain and contrast than would be possible with any of the medium-speed general-purpose films force-developed for greater speed. But, under average daylight conditions, and even in many well-illuminated indoor situations, super emulsion speeds are unnecessary, undesirable, and impractical.

Frequently the highest shutter-speeds and smallest lens openings cannot "brake" this emulsion speed. So, many photographers have turned to neutral density

filters, which admit only a small, fixed percentage of the incoming light and permit high-speed film to be exposed as if it were a medium- or slow-speed emulsion. Result: a serious increase in graininess, a marked loss of contrast and gradation, and a useless sacrifice of negative sharpness.

keys to success

There are two keys to success with super-speed films: *a.* avoid overexposure; *b.* use a development technique tailored to their specific requirements.

a. exposure technique

Overexposure is ruinous for three reasons. First, density and graininess of the negative are directly related: the denser the negative, the grainier the image. This is true whether excessive density is caused by overdevelopment or by overexposure.

With high-speed films, the relationship between density and graininess is stronger. An increase in negative density of 100 per cent may not materially affect the apparent graininess of thin-emulsion or medium-speed film, but in a high-speed film it may spell the difference between a negative that can or cannot be enlarged without objectionable graininess.

The second reason why overexposure is death to high-speed films is that these films have less inherent contrast than normal films. Overexposure further reduces the effective printing contrast by building up considerably more density in the shadow areas of the negative than in the highlights, resulting in flat negatives.

Finally, overexposure of high-speed films must be avoided because it reduces negative sharpness. The high-speed film has a great sensitivity to the adverse effects of irradiation—the diffusion of light rays within the emulsion layer of the film. The increased thickness of high-speed film emulsions permits this irradiation to distort the size and shape of the image point. And, because of the emulsion's great sensitivity to light, many extraneous silver halide grains in the emulsion will become developable. When these non-image-forming deposits reach printable densities, they degrade the optical image sharpness.

The best way to avoid overexposing high-speed films is to adopt an effective film-speed index higher than that suggested by the film manufacturer—and stick to it.

Notice that we said the film-speed index "suggested" by the manufacturer. This is exactly what these nominal ratings are—suggestions, not absolute values. They contain generous safety factors to ensure that unskilled (or even careless) photographers will get printable negatives. But, however useful these "cushions" may be, they are of no importance to the serious photographer who uses an accurate photoelectric exposure meter and a camera whose shutter speeds are accurate and dependable.

b. development technique

Increased effective-film-speed indexes you choose may be as low as 400 or 500 or as high as 800 or 1000 (ASA system), depending mainly upon the development given. Contrary to what you may have been led to believe, these ratings do not depend upon forced development. The development times that we have recommended and summarized in chart form are actually only equal to, or somewhat *less* than, those recommended by the manufacturers of the films and/or developers.

Ultra-high-speed films have thick emulsions, which are literally loaded with light-sensitive silver halide. Consequently, they develop somewhat more slowly than medium-speed films, and considerably more slowly than thin-emulsion films. The developer you choose must be fairly soft-working so that the highlight areas do not become overdeveloped during the relatively long immersion period. And despite the

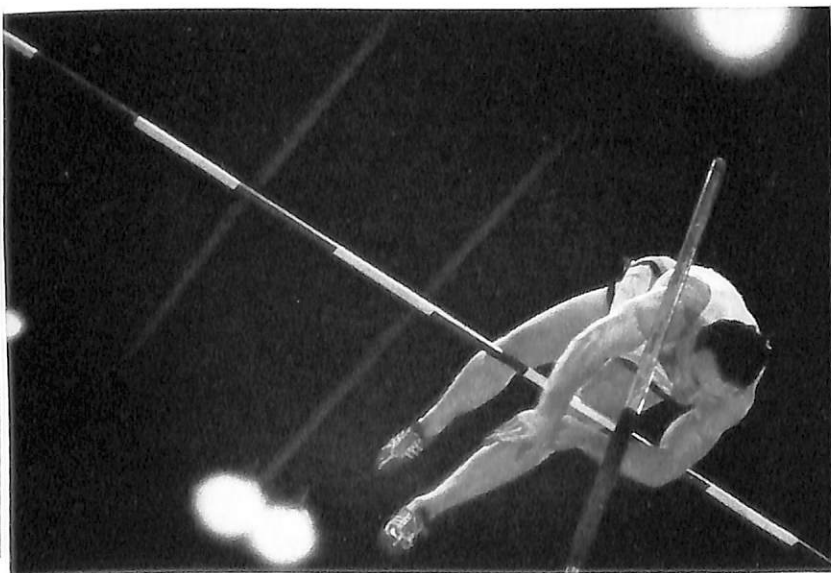
fact that these films have inherently low contrast, excessive contrast is more frequently the problem than insufficient contrast, or flatness. This is because in many dim-light situations, the highlight-to-shadow brightness ratio is very great. Your developer should not, however, be so soft-working that it fails to produce adequate tonal separations within the shadow areas on the negative.

Overdevelopment, however, ruins good 35mm available-light negative quality just as much as overexposure, and for basically similar reasons. Every additional minute of development builds relatively more density in the highlights than in the shadows. Excessive contrast with blocked-up, unprintable highlights is the result of developing for longer than is needed. The excessive density produced also increases the clumping action of adjacent silver particles. These tend to join together within the emulsion to form large complexes.

What can or can't be called "overdevelopment" depends to some extent upon the exposure given. Badly underexposed negatives can sometimes be rescued by 50 or even 100 per cent overdevelopment, with reasonable graininess, and (if the original lighting conditions were fairly flat) reasonable contrast.

principles to apply

The principles of exposure and development of super-speed films are then very much like those of other films. For maximum quality, you must:



POLE VAULT. Exposure: 1/500 sec., f/2.8; Tri-X. Reflection from sawdust floor gave the only foreground illumination.



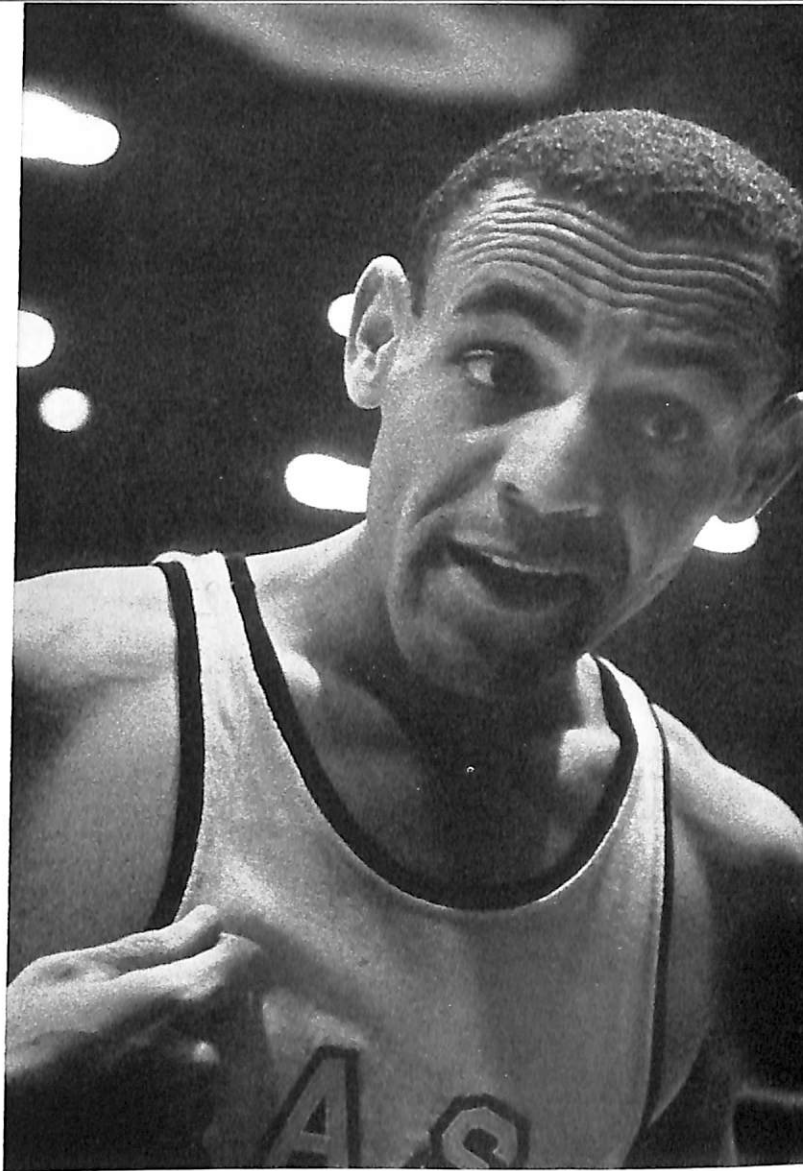
CIRCUS. Exposure: 1/100 sec., f/2.8, in very weak, colored light. S-X film rated at 1600, Promicrol-developed 14 minutes.

1. Give the least amount of exposure that will yield the minimum amount of shadow density that you require.
2. Give the shortest developing time that will produce the necessary minimum shadow density plus the desired over-all negative contrast—without blocking up the highlight areas.

In this way, you will get detail in both shadow and highlight areas, reasonably fine grain, and a long scale of negative gradation appropriate to the conditions that existed in the original scene.

The two most important high-speed films today are Kodak Tri-X, which is nominally rated at ASA 200 in daylight and 160 tungsten; and DuPont S-X Pan, which is rated at ASA 300 in daylight and 260 in tungsten light. Tri-X is obtainable in 20- and 36-exposure cartridges as well as 27½-, 50-, and 100-foot bulk lengths. S-X is available in 100-foot rolls.

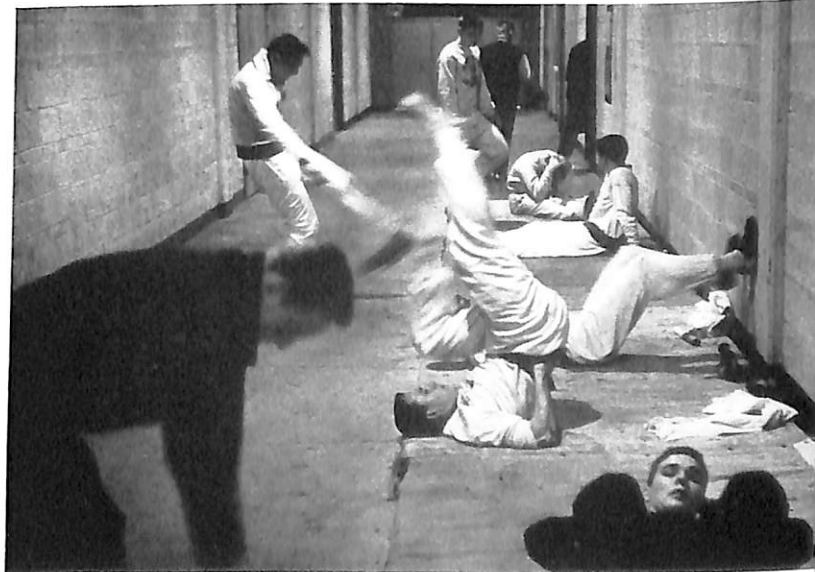
Both are approximately equally fast, although S-X can be used less disadvantageously at very high emulsion speeds because of its greater developing latitude. This additional latitude is entirely in the direction of overdevelopment. If you underdevelop to compensate for overexposure, S-X negatives will usually be too flat. Tri-X has somewhat greater over-all negative contrast than S-X, when exposure and development is the same. However, when about ¼-stop less exposure is given and development is extended one to two minutes, S-X actually produces slightly *more* shadow contrast and slightly *less* over-all contrast than Tri-X.



MAL WHITFIELD, American mile runner. Exposure 1/25 second at f/2, Summicron lens. Tri-X film, overdeveloped.



RAIL TRAVEL. Made with the new Leitz 28mm Summaron, 1/25 second, aperture wide open; S-X film developed normally.



LIMBERING UP in corridor too dim for meter reading, these athletes were shot at 1/25, f/2; Tri-X developed in D-76.

This guide is drawn from the author's experience with two super-speed films. Data for speed and development are designed to yield negatives that will print easily on normal (#2) grade papers.

guide to exposure and development

DEVELOPER	KODAK TRI-X		DUPONT S-X PAN		REMARKS
	SPEED*	DEVELOPMENT†	SPEED*	DEVELOPMENT†	
Kodak D-76	650-800	10-12	650-1000	12-14	Grain and contrast with D-76 exceed other developers listed. Use for longer-than-indicated maximum immersion times is not recommended.
May & Baker Promicrol	650-800	12-14	650-1000	12-16	Promicrol gives very fine, "D-76 type" grain, with maximum shadow detail, minimum blocking, good over-all contrast and low fog level. In emergencies, times may be extended to 18 min. for Tri-X, 25 min. for S-X Pan, with good quality.
Ilford Microphen	650-800	13-15	650-1000	14-16	Very low-contrast, soft-working Phenidone formula. Gives maximum extended development times. Excellent choice for known underexposures.
Kodak D-23	400-500	12-13	400-650	12-15	Simple, reliable Metol-sulfite formula. Very soft-working; Gives maximum exposure latitude, almost never blocking up highlights, balancing outdoor and indoor exposures with same development time.
Clayton P-60	400-500	12-13	400-650	12-14	Soft-working, fine-grain Phenidone formula. Similar to Microphen but gives better shadow contrast and finer, more sharply defined grain. Data are for recommended 1:2 dilution.

*Approximate effective film-speed indexes for use with ASA-calibrated exposure meters.

†Time in minutes at 68° to 70° F., with intermittent agitation for 5 to 10 seconds per minute, using fresh solutions.

conclusions drawn

In using these films, keep several things in mind:

First, in light levels where medium-speed or thin-emulsion films will permit comfortable shutter speeds and diaphragm stops, there is no sense in using super-speed films, which have inherently coarser grain, less brilliant gradation, and less sharpness. Instead of carrying neutral-density filters, pack an extra roll of a slower film in your gadget bag. When it comes to image quality, you can't fool your enlarger.

Second, the "leeway" in exposure and development is proportional to the contrast in the original scene. Under extremely flat lighting we can employ very high effective film-speed ratings, compensating for very short exposures by appropriate overdevelopment. With very contrasty scenes we must stick very closely to normal film-speed rating and development time.

Third, when the available light is extremely weak, the normal relationship between exposure and development is reversed. Increasing exposure will build

considerably more highlight than shadow density, with the risk of blocking up highlights in exposure as well as development. The only answer is to read the meter and give an exposure recommended by the effective film-speed index you're using.

Fourth, the biggest sources of poor negative quality are overexposure and overdevelopment. "Just to be on the safe side," many photographers will foolishly increase both exposure and development, thus producing a dense, grainy, unsharp and frequently blocked-up negative. The only answer is to make your own tests and learn to have confidence in the effective film-speed rating and development time you arrive at.

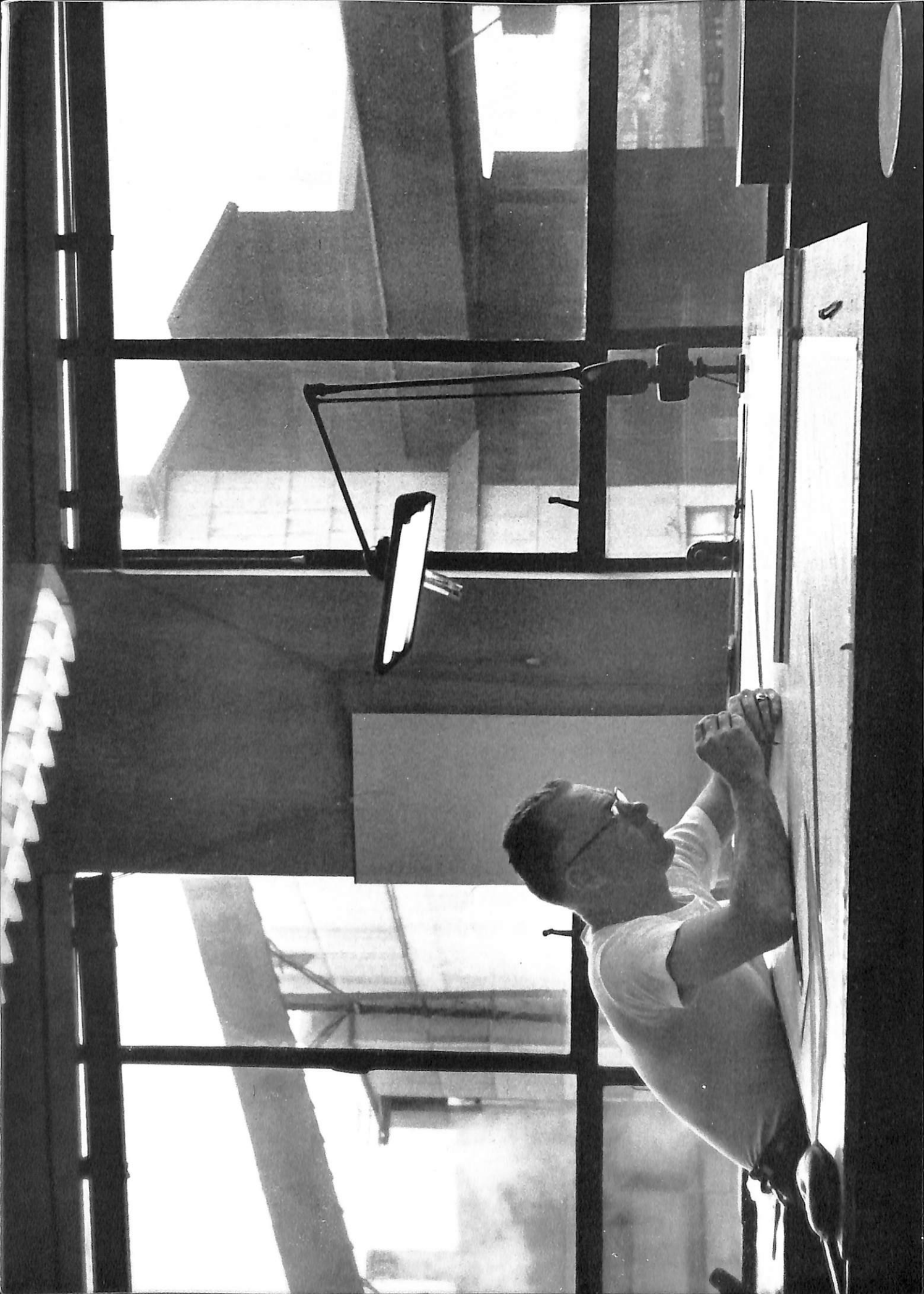
High-speed films should be used only when their speed is needed and wanted. In dim light you exploit this high emulsion speed when you eliminate the need for flashbulbs or speedlights, and thus preserve natural light quality. But used in very bright light these films can set back picture quality to below the standards of twenty years ago.

Leica portfolio

*Presenting four examples of the
many outstanding contributions
made to photography by Leica
owners in all parts of the world.*

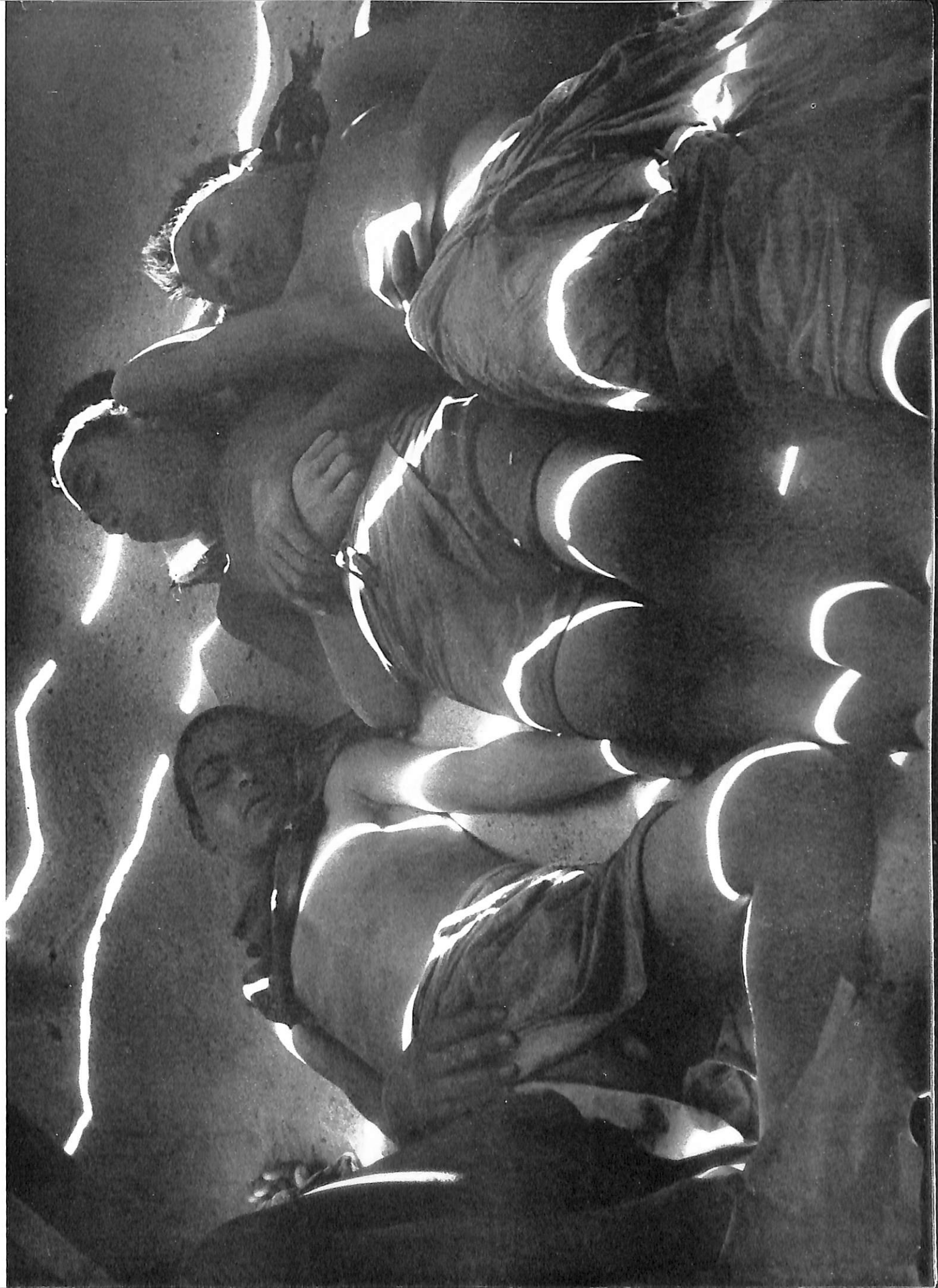


Ormond Gigli, New York. Portrait of Hildegard Neff. IIIf, 35mm Summaron 3.5.



Ivan Massar, Pittsburgh. Draftsman at Benson Mines, Star Lake, N. Y. III, 50mm Summarit 1.5.

Ernst Haas, Vienna. Shelter from the noonday sun, Egypt. III f, 50mm Elmar 3.5.





Sabine Weiss, Paris, Cigarette in the fog. IIIf, 50mm Summarit 1.5.

neofin—an unusual developer/ John H. Rauch, A. R. P. S.

will it improve your pictures—when, how and why?

Several years ago my associate, Major H. H. Sykes, and I felt convinced that the technique of miniature photography in Europe was decidedly ahead of that in the United States.

Here, emphasis had always been on fast film. For many years, perhaps half a century, manufacturers have tried to improve the quality of fast film, using every imaginable chemical trick to produce "fine grain" in its development. It was the best compromise that the most skilled chemists could provide. But we believed that compromise could only beget compromise.

Europe had taken a different line. Along with advances in the faster films came corresponding advances in the slower films. You can't avoid the fact that, up to the point dictated by inherent contrast, the slower the film, the better the photographic quality of the result. The introduction of Neodyn (now Neofin) by Tetenal of Hamburg was the beginning of a revolution in photographic thinking. It enabled photographers to make negatives of unprecedented resolution, using slow, thin-emulsion film of inherently fine grain, like Dr. Schleussner's Adox, yet without loss of speed or blocking of highlights.

For 11 months Major Sykes and I tested most of the available material—nearly 90 film-and-developer combinations. The result was a discovery that was made independently at about the same time by several other experimenters.

Our tests confirmed that the combination of Neofin and Adox gave markedly superior results, though several other films exposed and developed in Neofin showed some improvement. In fact, this system originated one of the major modern photographic revolutions. Eastman Kodak, which had discontinued Panatomic-X, brought it back, new and improved. Perutz Pergrano and Ilford Pan F found new adherents. The FR Corporation, alert to the Neofin technique from the first, formulated its own X-22. Meanwhile, Tetenal improved its original formula and also perfected the shipping containers. To avoid possible confusion with the DIN system of film rating, it was renamed Neofin.

fine-grain development

The superiority of the Neofin system lies in that it properly deals with the problem of "graininess." The grain of any film after development cannot be

observed by the human eye. But the clumping together of these grains caused by development produces the objectionable quality of graininess. The partial dissolving of these clumps by "fine-grain" developers does not solve the problem, because diffusion is introduced and a noticeable lack of critical sharpness results. What's more, fine-grain developers usually call for a longer exposure, thus losing some of the advantages in film "speed."

To obtain the maximum resolution inherent in a film, necessary because all good lenses resolve more detail than the film can record, and to utilize a film's potential speed, you must use an appropriate developer. Such a developer needs high energy to permit short exposures that minimize irradiation. It must also be soft-working, in order to give delicate tonal range while keeping highlights open and separating

TABLE I

development times—neofin

Times given (in minutes, at 68° F.) will produce a gamma of approximately 0.7. (Neofin may be used safely at temperatures up to 80° F. but time-temperature tables are not yet available.) Having obtained correct development time for a given film, you may consider further refinement for individual subject contrasts.

FILM	ASA RATING†	NEOFIN BLUE	NEOFIN RED
ADOX 14	24	12	—
ADOX 17	80	18	12*
ADOX 21	160	24	16
ANSCO SUPREME	80	24*	24
GEVAERT 27°	50	18	15*
GEVAERT 33°	160	—	20
ILFORD PAN F	32	16	—
ILFORD FP3	80	25	16
ILFORD HP3	200	—	20
KODAK PAN-X	40	12	—
KODAK PAN-X (roll)	40	—	18
KODAK VERI. PAN	100	20	18
KODAK PLUS-X	100	24	18

*May be used but is not especially recommended.

†With some emulsions, Neofin allows an increase of manufacturers' ratings.

shadows—and it must not clump the grains. Neofin meets all these requirements, and all but the extremely fast films react to it most favorably.

The Neofin formula is an improved variation of Willi Beutler's original formula of Metol and sodium sulphite in solution A, and sodium carbonate in solution B (see *Leica Photography*, Summer 1955). It is extremely simple to use and reliable, producing negatives of unique quality. Its resolving power is unsurpassed. With the advent of the Neofin technique, you can make enlargements from Leica-size negatives that will look like contact prints from larger negatives.

Neofin technique

Exposure should be short. Generally about half the normal exposure is correct for Neofin development. Neofin allows considerable exposure latitude and also considerable time and temperature latitude. Neofin also gives speed where it is most wanted. The slower the film, the greater the speed latitude it allows and even encourages; and the faster the film, the more closely you should stick to the recommended rating. In fact, Neofin is neither designed for nor especially

successful with very fast films, that is, those of ASA 200 and higher.

Neofin is highly unstable and should be used only once. Unopened and undiluted, the vial will keep indefinitely without deterioration.

You can buy Neofin in three forms:

Neofin Blue is a soft-working developer, recommended for the slower high-contrast films, up to ASA 32, and for all Adox films, except where the subject lighting is flat.

Neofin Red is a more "contrasty" developer, slightly faster in action, and recommended for films rated higher than ASA 32.

Neofin Tank Developer is a more stable developer, supplied in bulk quantities, and designed specifically for commercial-tank use.

Neofin comes as a liquid concentrate in glass vials of 35 cc. In standard use, enough water is added to make 500 cc.—approximately 17 ounces.

Ed.: Neofin is distributed nationally and is readily available at photo dealers or through the U.S. importer, Photo Import Associates, Box 1302, Winter Park, Florida.

TABLE II

time factors for various dilutions—neofin

From the second column below, choose a dilution amount that will fill your developing tank with minimum waste. Then multiply standard development time (see Table I) by the corresponding dilution factor in the third column below. This is the most economical way to use Neofin. Do not dilute in proportions higher or lower than those given.

NEOFIN (BLUE OR RED)	WATER (CC.)	MULTIPLY DEVELOPMENT TIME BY
one vial* (35 cc.)	700 (1:20)	1.4
	600 (1:17)	1.2
	500 (1:14)	1.0
	400 (1:11)	0.8
	300 (1:8.5)	0.6
	300 (1:17)	1.4
one-half vial** (17.5 cc.)	250 (1:14.5)	1.25
	200 (1:11.5)	1.0
	150 (1:8.5)	0.8
	300 (1:8.5)	1.4

*For two films developed together, increase time by 25 per cent. For two films developed successively, increase time for second film by 50 per cent.

**Can be used for one film only. For safekeeping of remainder, fill the half-empty tube with water, reseal at once, and label. In a cool, dark place it will keep for several months.

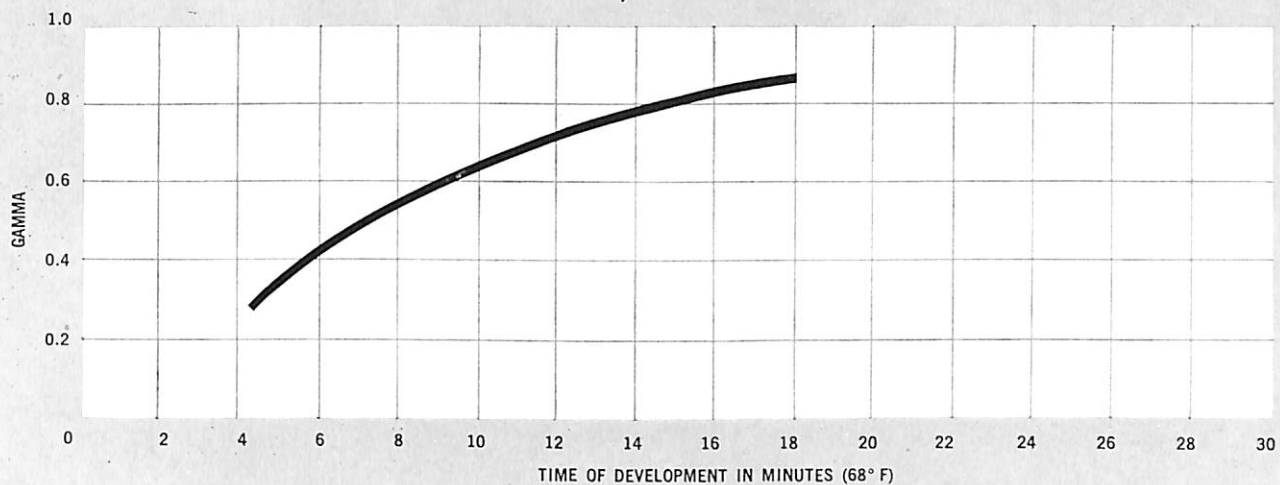
TABLE III

negative contrast control—neofin

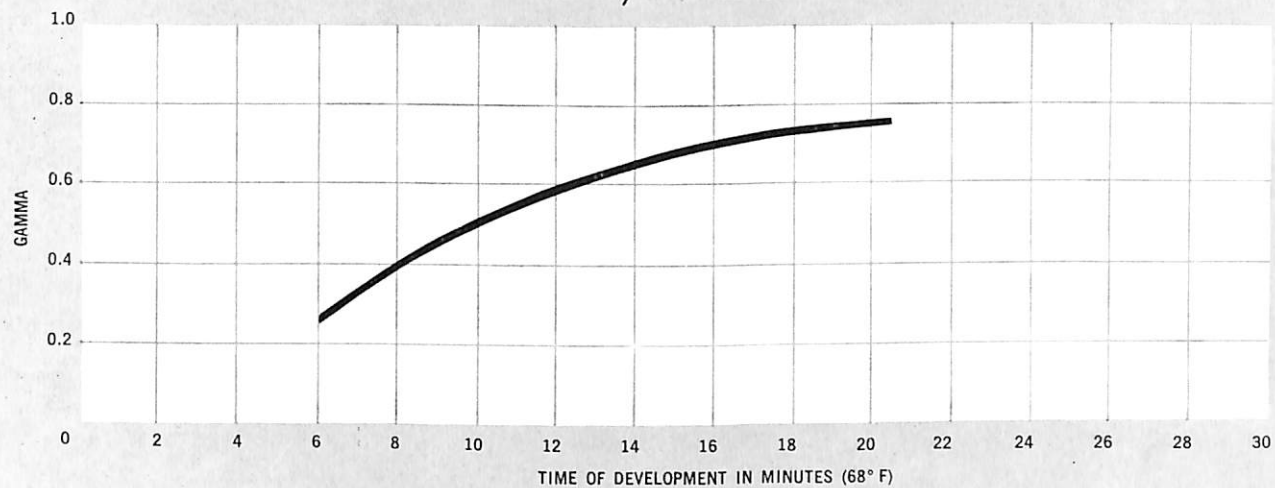
To get an "ideal" negative contrast of 1:30
(for "No. 2" paper):

if subject contrast is	read highlight with meter, then expose	and develop for gamma of
1:500 (architectural interiors; night scenes)	3 to 4 times normal	0.5
1:100 (street scenes; back- lighting subjects in daylight)	normal	0.7
1:30 (open landscapes; front- lighting architecture)	1/3 normal	0.9

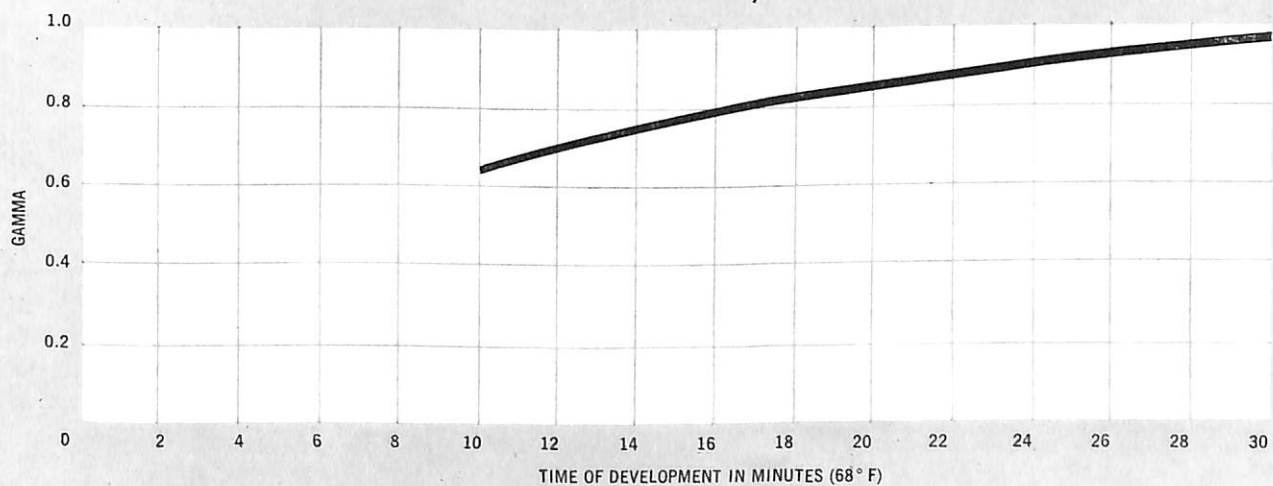
gamma-time curve • ADOX KB 14/NEOFIN BLUE



gamma-time curve • ADOX KB 17/NEOFIN BLUE



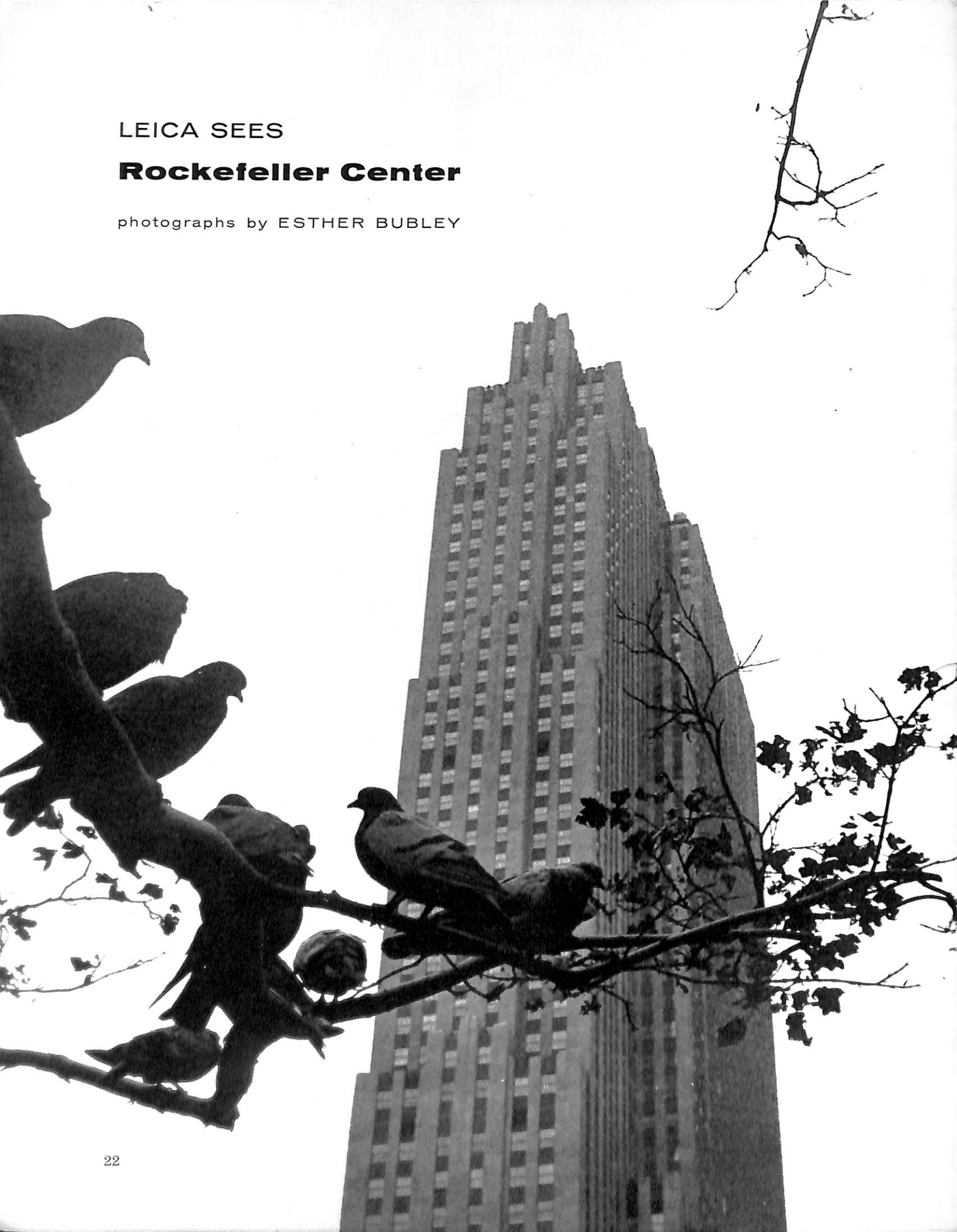
gamma-time curve • KODAK PANATOMIC-X/NEOFIN BLUE



LEICA SEES

Rockefeller Center

photographs by ESTHER BUBLEY





SKATING RINK, in middle of Center. IIIf, 50mm Summicron.

Most people think of Rockefeller Center in terms of skyscrapers grouped against a setting of statues and formal gardens. Photographer Esther Bubley and her Leica have captured this familiar impression of sleek, modern architecture, but unlike the pictures seen in travel folders or in the average tourist's album, her photographs also convey, in a highly original way, a sense of life among these impressive structures.

Every day some 160,000 persons use Rockefeller Center as a place for business or leisure. Some are permanent residents and many more are transients. To Miss Bubley, who lives only a few blocks from it, the Center is her neighborhood, and she set out to photograph it as another person might photograph the three or four blocks surrounding his home. Yet she faced a real challenge, for through pictures much of her neighborhood has become familiar to millions of people, many of whom have never visited it. Thus the photographer had to present something already well-known in a way that would give special insights of the kind that are usually gained only through much greater knowledge of a place—knowledge such as her own.

OUTDOOR CAFE, after a rainstorm. IIIf, 35mm Summaron.

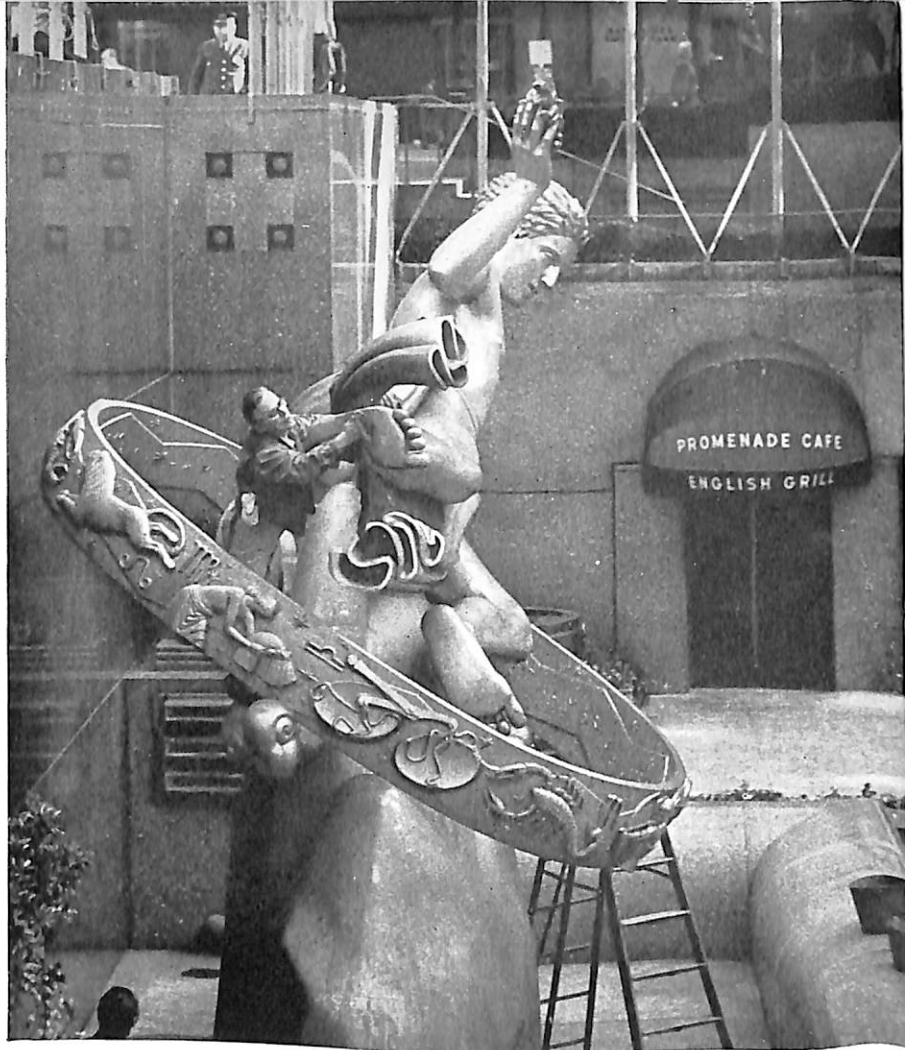


◀ RCA BUILDING, from across the street. IIIf, 35mm Summaron.

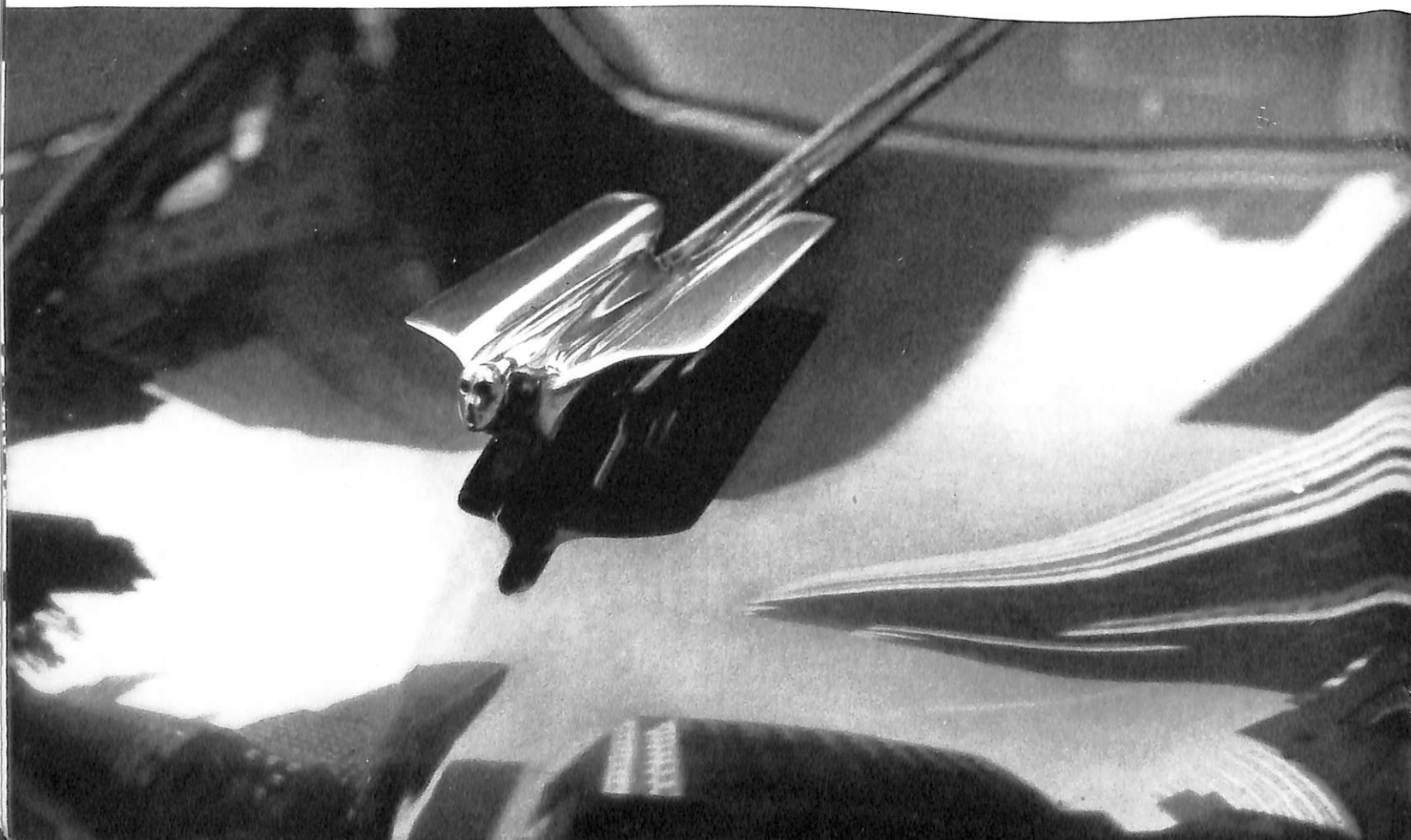
Rockefeller Center (contd.)



BIRD, huddled during rain. IIIf, 50mm Summicron.



PROMETHEUS, early in the morning. IIIf, 50mm Summicron.





QUEUE, at Radio City Music Hall. IIIf, 50mm Summicron.

PASSERS-BY, resting against parapet. IIIf, 50mm Summicron.



RCA BUILDING, from two blocks away. IIIf, 35mm Summaron.



◀ BUILDINGS, reflected in parked car. IIIf, 50mm Summicron.

what makes for picture sharpness? / Joseph Foldes

many factors—how many of them do you know?

The technique of many photographers is not nearly as sharp as the lenses they use! Any fine lens can throw a crisp image on the film plane, but the picture will not be crisp unless the photographer keeps under control other factors that affect picture sharpness—and there are many. Here you will find some of the things that can make the difference between indifferent and critical sharpness in your pictures.

contrast

To observe sharpness, you must have contrast of tones. The more contrast, the greater the apparent sharpness of the picture. Figure 1 is a photograph of a sheet of white paper. Is it sharp or blurred? Figure 2 shows a black-and-white sheet. Extreme contrast renders the separation of tones most distinct.

Figures 3 and 4 show practical examples of the same subject taken in soft, front light and in strong, side light. Actual sharpness is the same but the cross-lit shot seems sharper.

The same principle applies with artificial light. Figure 5, taken with diffused floods, has soft effect; Figure 6 shows contrasty effect of spots. Figure 7 shows texture emphasis produced by skim lighting. *But actual sharpness is about the same in all three shots.*

camera alignment

The precision of a lens mount and the camera body itself are as important to sharp pictures as the design of the glass lens elements. It is good practice to have your camera and lens checked once a year by a reliable

1



2



3



4



repairman. Figure 8 represents the image of a point subject (exaggerated for purposes of illustration) projected on a film surface by: (A) a properly focused and mounted lens; (B) a lens mounted too short or positioned too close; (C) a lens mounted too long or positioned too far out. The large-circle renditions of the same point represent the blurred images resulting, in practice, from improperly mounted or inaccurately focused lenses.

Figure 9 shows how a properly focused and adjusted lens mount forms point images on a correctly aligned film plane (A), and a misaligned one (B). In the latter, part of the image (center) may be sharp, parts are blurred (ends).

aperture

A law of optics says, in effect, "the smaller the aperture, the greater the depth of field" (distance from the nearest to farthest object in sharp focus). This is for a lens of given focal length focused for a specific distance. In Figures 10a, 10b, and 10c, the lens was range-finder focused on the sixth column from the left. Figure 10a was shot with the lens wide open; Figure 10b was taken stopped halfway between the largest and smallest f-stop on the lens scale; Figure 10c shows depth of field at the smallest aperture. Using the proper aperture permits you a selective sharpness, which can be used to emphasize or suppress pictorial elements. Your Leica instruction book tells you how to use the depth-of-field scales on Leica lenses. You can also control depth of field by choosing the appropriate focal length lens.

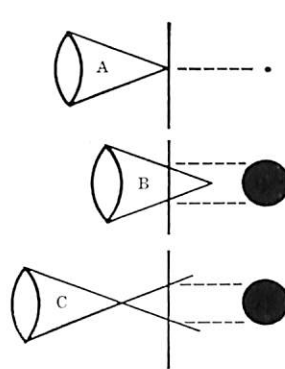
camera and subject motion

Perhaps the biggest enemy of negative sharpness—often unsuspected—is camera motion. Even at 1/200 second, camera motion can spoil the pin-point sharpness of an image cast by the lens. At 1/50 and 1/100,

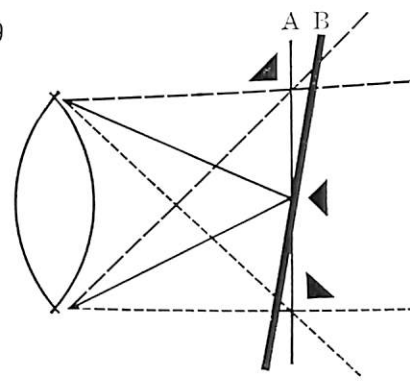


7

8



9



10a



10b



10c



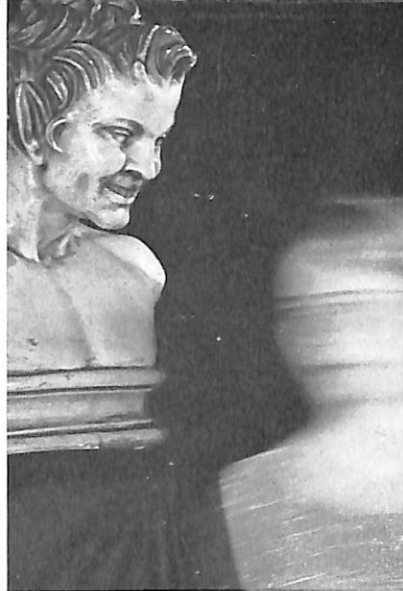
5



6



11a



11b



11c



12

its effect is more often felt. Figure 11a shows a picture with no camera or subject motion. Figure 11b could have resulted only from subject motion alone, since the statue is sharp. Figure 11c represents camera motion, exaggerated here for emphasis, which blurred both the girl and the statue. Another thing: the longer the focal length of the lens, the greater the possibility of camera motion.

Happily, you can easily defeat these two enemies of sharp pictures. Your instruction book tells how to hand-hold your camera and release the shutter with greatest steadiness. Below are some other ways to keep the subjects of your pictures sharp. Figure 12 shows that catching the peak of noncontinuous action—the point at which motion in one direction stops and motion in another direction starts—keeps subject motion in the image at a minimum. Figure 13 is an example of “panning” the camera—swinging it to follow a continuous action of the subject while releasing the shutter. This keeps the subject sharp and blurs the background—one way of contributing a feeling of action. Figures 14a, 14b, 14c, and 14d show some methods of holding the camera steady while shooting.

The angle from which action approaches the camera is important, too. There is far less chance of subject motion when action comes head on or at a 45° angle than if it moves at right angles to the lens.

exposure and development

Irradiation within the emulsion from overexposure, and increased graininess from overdevelopment will also degrade sharpness. All other things being equal, a print from a thin negative will usually appear some-



13

14a



what sharper than one from a dense negative. Figures 15a and 15b show, respectively, a negative that has been overexposed and overdeveloped, and a normal one. In the originals, the difference is even more obvious.

enlargement

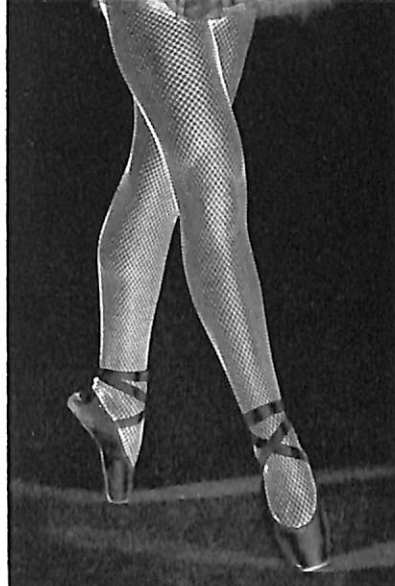
A sharp negative goes only part of the way toward the final goal of a sharp print. Slight vibration of the enlarger during exposure can "erase" sharpness. Even cigarette smoke gathering under the enlarger light-beam in the darkroom can cause a diffusing effect.

In focusing, always start with the diaphragm wide open, focus carefully, then stop down about two stops. Be sure, too, that the negative carrier and the surface of the printing paper are parallel. Misalignment of the two has the same effect that misalignment of lens and film plane has in the camera. Figure 16a is a print made properly—sharp from bottom to top. Figure 16b was made with the negative carrier tilted out of parallel with the paper. One end is badly out of focus.

other factors

Along with the foregoing, the right film-and-developer combination can do a great deal toward making your negatives sharp. Thin-emulsion films such as Panatomic-X and Adox, processed in Neofin or X-22, can give to enlargements a resolution resembling that of contact prints. Paper surface has its effect, too. A glossy print will look sharpest, while rough-textured mat papers begin to destroy detail and tonal separation.

By keeping the foregoing in mind, you will form a basis for *preserving* the sharpness that your lens puts into your pictures.



15a



15b

16a



16b



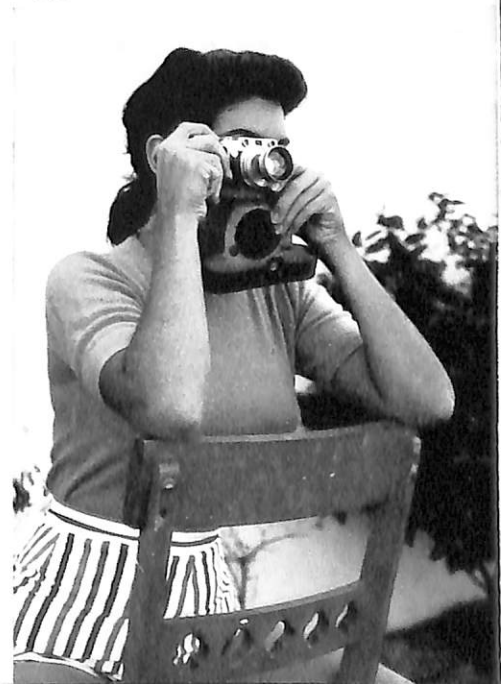
14b



14c



14d



focusing on...

this issue. Not all of the Leica owners represented in each issue are written about. But editors are aware of readers' curiosity about authors and photographers, so here are some briefs on the contributors to this issue:

Edward Wallowitch ("chalk game") is the talented young photographer from Philadelphia who received widespread recognition a few years ago for his sensitive "candid" of city children. He furthered his photographic training with a stint at the Institute of Design in Chicago. He is now a free lance, lives in New York. To get started in the professional field, Ed worked at various times as farm hand, receiving clerk, druggist's apprentice, and copyboy, taking his Leica with him on week ends and between jobs until he had packed away an impressive portfolio to show to editors and art directors.

Bob Schwalberg ("super-speed films") has gained a reputation for his regular and prolific reporting on new photographic equipment and materials in the popular photographic magazines. In addition to his behind-the-photographic-scenes work, Schwalberg uses up the rest of his time as a free lance contributor to general magazines.

Ormond Gigli ("portfolio") photographed actress Hildegard Neff in her apartment while she studied the script of *Silk Stockings*, the Broadway musical which just completed its run this spring. The portrait was entirely informal, with a nearby table lamp and natural room light providing the illumination.

Ivan Massar (page 16) and Clyde Hare (cover photograph) are two young imaginative photographers who work as a professional team. About 90 per cent of their photography is done with Leica M-3's. This is surprising when you realize that much of their effort is expended in the industrial and advertising fields, where tradition has called for the use of the larger cameras.

Ernst Haas, the great impressionist-photographer of our time, was covering the location shooting of the Hollywood film *Land of the Pharaohs* in Assuan, Egypt, when he saw the Egyptian boys sleeping under a boardwalk-like construction. What might represent a technical problem to most photographers was to Haas the very making of a photograph by "straight" technique. By exposing and developing so that the shadow area or majority of the picture would be rendered a dark, neutral tone, he heightened the effect

of the scorching stripes of light, thus succeeding in conveying the essence of his original impression.

Sabine Weiss is one of the top photojournalists of France. Her photograph of a man lighting a cigarette in the fog at night is proof that the modern precision 35mm camera must be equipped to respond to the most fleeting and instantaneous images. Her Leica literally extends her vision to us.

new Leica-Meter "MC." A newly designed exposure meter that couples to the Leica M-3 is now available. The new "MC" is set and read in the same way as the previous model "M," but has a number of new features as well as a new look. It is thinner and more compact and has scale settings of exposure indexes up to ASA 1000. Provided are adapters for reading incident light.

Another new feature is a change in the method of selecting sensitivity ranges. Where formerly a hinged baffle over the honeycomb window was raised to increase sensitivity for low light levels, the new meter has a sensitivity selector dial for *internal* switching to either of the two light-level positions.

As with the former meter, a booster cell is available to increase the meter's sensitivity still further for extremely dim light, boosting it by six times rather than four as in the past. Instead of connecting to the end of the meter as with the previous model, the new booster cell now slides onto two contact rails on the front of the honeycomb window.

Weight of the meter, without booster cell, is only 2¾ ounces. Price, with incident light adapters and booster cell, \$39; without cell, \$33; cell alone, \$7.50.



ruggedness. A Leica owner in Georgia writes of an accident in which his car turned over several times. Fortunately, he escaped with little injury. During the crash, his Leica, which had been on the seat beside him, caromed around inside the car and ended up buried in roadside mud. After wiping off the mud, our correspondent found no damage at all to his camera. In fact, it didn't even need a professional internal cleaning after the mud bath and the banging around.

frame selector installation. The new frame selector, a feature of the latest Leica M-3, can now be installed on earlier M-3's at a charge of \$16. The frame selector permits you to preview the fields covered by the 90mm and 135mm lenses without attaching the lens to the camera. It does not interfere in any way with the automatic features of the viewfinder.

Should you want this or any other modification or repair for your Leica, please see your Franchised Leica dealer. He'll be glad to help.

historic action studies. In the 1880's Eadweard Muybridge (first name pronounced simply Edward—the eccentric genius adopted the ancient-looking spelling in attempting to acquire “status”) proved photographically that all four feet of a galloping horse can be off the ground at one time. The success of this experiment, which was sponsored by Leland Stanford, then Governor of California, led Muybridge to do further research in analytical photography of animals and humans in action.

Working with the relatively crude, slow lenses and films of the day, Muybridge and his ingenious associates nevertheless devised techniques to shoot as fast as 1/6000 second, with up to 48 interval-timed shots per action!

The result of these studies—the monumental folio edition, “Animal Locomotion”—appeared in 1887. Choosing from 100,000 dry-plate negatives, Muybridge published it in 11 huge sections at \$550 per set. They were the first rapid-sequence photographs of bone and muscle in motion.

The original work is among the rarest of American publications.

Because of the interest in Muybridge's work to doctors, artists, and historians of art, science and photography, a selection from his most important plates has recently been made available in “The Human Figure in Motion” (Dover, New York, 407 pp., \$10). It shows men, women, children, and women and children mostly undraped, performing 163 types of action—running, walking, lifting, throwing, and so on. Studying these pictures, one can hardly believe they were taken 70 years ago.

A detailed introduction by Professor Robert Taft of the University of Kansas discusses Muybridge, his methods and his colorful history.

Not only can this book add a rare bit of history to the photographer-collector's library, but, more fundamentally, it becomes a marvelous education in the intricacies of human physical activity, a subject that faces the Leica photographer more often than he might imagine.

“35mm Color Magic” by Walter Benser. Europe's “professional amateur” and Leica expert extraordinary has put a wealth of practical information into this beguiling introduction to color photography. Written in the same chatty style that makes his lectures famous, the book is a highly anecdotal but inclusive guide to making beautiful transparencies. Forty color pictures, each with accompanying text to tell the “why” of the shot, are not only eye-catching but illustrate the author's tips for better pictures.

Although Benser avoids any pedantic treatment of his subject, the thorough index in the back reveals that there is actually a hard core of logic and organization behind the casual paragraphs and chapters. Recommended as a painless path to good color pictures. Available from Franchised Leica Dealers; cloth-bound, 200 pp., \$6.90.

“The Leica In Professional Practice” by Heinrich Stöckler. There are a number of good books on Leica technique. This latest one, an English version of a German text, is distinguished for its intelligent editing. It is beautifully printed, with many impressive illustrations, 50 in color. Mr. Stöckler, our editor colleague of the European *Leica Fotografie*, demonstrates perfectly an editor's prime functions: to select fine material; to be faithful to a publishing purpose; to present the material most attractively.

Here, the material consists of 26 articles by experts in 26 fields. The purpose: to present essentials of Leica technique as embraced by such professional branches as photojournalism, advertising, education, microfilming, archeology, criminology, the natural sciences, medicine—even psychology.

We will wager a guess that though the amateur will directly benefit from this book, mainly insofar as its thoroughness can broaden his technical abilities, he is likely to be made a professional prospect by the inspiration that sparks from 26 measures of author's enthusiasm. Looking at it that way puts the \$10 price in the category of “sound business investments.” Available from Rayelle Publications, 5700 Oxford St., Philadelphia, Pa., or Franchised Leica Dealers; clothbound, 344 pp., \$9.95.

12 unique features of the M-3 that prove

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1. Combined viewfinder-rangefinder of life-size image offers the benefits of both split-image and coincident-image focusing.

2. Bright-line frames in viewfinder are automatically brought into position by the interchangeable 50mm, 90mm, 135mm lenses; frame selector offers preview of fields of view.

3. Automatic parallax compensation is continuous for all lenses, from infinity to closest distances.

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5. Viewfinder accuracy is unaffected when viewing at oblique angles; extra-large eyepiece guarantees perfect sighting even when wearing glasses.

6. Automatic film counter resets itself for next roll of film when take-up spool is removed from camera.

7. Shutter speeds on one dial (click-stops: 1 to 1/1000 second, and B for time exposure).

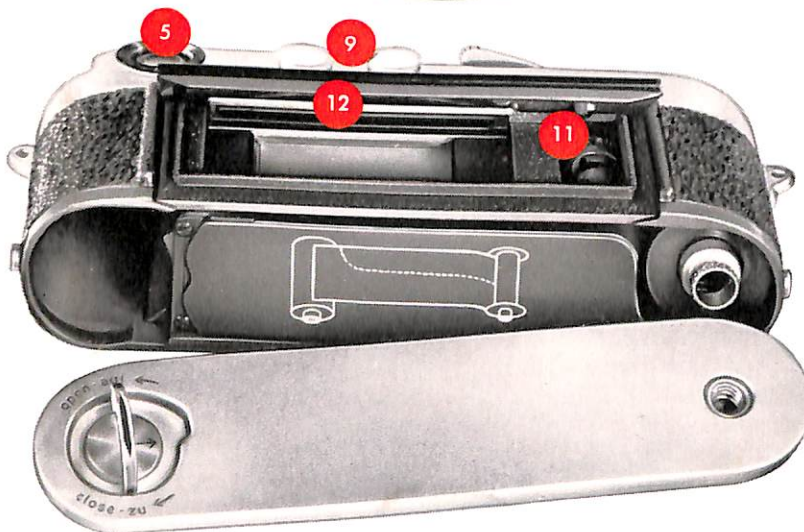
8. Removable exposure meter couples with entire range of shutter speeds, has extremely wide range of light sensitivity.

9. Internal contact adjustment assures full flash synchronization for many types of flashbulbs, and electronic flash at 1/2s and 1/50s.

10. Bayonet lens mount combines quick-change convenience with the precision formerly associated only with the screw-thread types.

11. Hinged back plate for easy loading and inspection; constructed so that the rigidity of the classic LEICA housing is maintained.

12. Extra-large glass pressure plate and long, precision-ground film tracks guarantee a truly flat film plane.



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